



October 2, 2001

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Illinois Center Plaza Venture
An Illinois Limited Partnership
c/o Mr. Melvin Lippe
Alzheimer & Gray
10 South Wacker Drive
Chicago, Illinois 60606-7482

Mr. James Loewenberg
Loewenberg and Associates
1 West Superior Street
Chicago, Illinois 60610

RE: Addendum to Report: Results of Expanded Gamma Radiation Survey, 26-Acre Site,
221 North Columbus Drive, Chicago, Illinois—STS Project No. 1-32193-XH

Dear Messrs. Lippe and Loewenberg:

As you know, the U.S. Environmental Protection Agency (USEPA) performed radiation screening at the Family Golf Center property located 221 North Columbus Drive (the Site). The Site is developed with a golf course on a 26-acre parcel located to the southwest of the intersection of Lake Shore Drive and (lower) Wacker Drive in Chicago, Illinois. The USEPA measured anomalous gamma radiation levels in portions of the Site and requested that a more extensive radiation survey be conducted.

RADIATION SURVEY

Illinois Center Plaza Venture, an Illinois Limited Partnership (as the current owner and seller of the Site) and Loewenberg and Associates (as a potential purchaser of the Site) retained STS Consultants, Ltd. (STS) to perform a radiation survey at the Site. The purpose of the survey was to further explore areas exhibiting elevated gamma radiation and to sample and document the extent of radioactive materials those areas. The result of this work was described in STS's report dated September 19, 2001.

Following issuance of the September 19, 2001 report, it was determined that several areas near the perimeter of the Site were not included in the radiation survey. The areas not included in the initial survey were primarily covered with pavement (asphalt traffic drives/parking areas, concrete and brick walkways and patios, etc.). It should be noted that the presence of pavement limits the effectiveness of the survey in that the gamma radiation is attenuated or shielded by overlying pavement. As a result, the ability to detect anomalous gamma readings is somewhat diminished. Radiation screening conducted by the USEPA and (initially) by STS did not include paved areas or areas beneath floor slabs in

buildings. STS subsequently re-mobilized to the Site to survey radiation in paved areas not included in previous rounds of screening.

We understand that portions of the Site will be developed separately, and as such, these areas warrant surface radiation screening. To that end, areas not included in previous radiation surveys were screened, regardless of whether the area was paved or not. While the pavement diminishes the certainty of detecting elevated gamma readings, it may be possible to identify anomalies where gamma readings are sufficiently above the surrounding (background) readings. To this end, additional gamma radiation screening was conducted as described below.

EXPANDED RADIATION SURVEY

Field Methods

As with the previous survey work, STS laid out a 5 x 5-meter grid in areas not included in the initial survey. The grid coordinates used in the previous survey were correlated to the grid coordinates used to survey the remaining areas at the Site. A figure showing the limits of the expanded survey is attached.

The survey was conducted using a Ludlum 2221 ratemeter-scaler and a 2 x 2 NaI probe. The probe was unshielded to provide for maximum sensitivity in the reconnaissance mode. The probe was held approximately 1 to 2 inches above the ground and the entire interior of each cell was walked. The highest reading at each grid cell was recorded in a field log.

Field Screening

Approximately 760 additional 5 x 5-meter grids were added to the radiation survey area, as described below:

Sampling Along the Western Perimeter. The largest area in the expanded radiation survey was the parking lot located at the western end of the Site along Columbus Drive where an additional 276 (complete or partial) grid cells were added to the surveyed area.

Sampling on North Field Drive and North Harbor Drive. Areas located on North Field Drive and on North Harbor Drive (near the southern perimeter of the Site) where an additional 102 grid cells and 108 grid cells, respectively, were surveyed.

Sampling Along Other Portions of the Perimeter. Around the remainder of the perimeter of the Site, 90 (whole or partial) cells were surveyed near the northwest corner of the Site where data had not previously been collected. An additional 26 cells were surveyed near the southwest corner; and approximately 156 (whole or partial) cells were surveyed near the southeast and east perimeter of the Site.

RESULTS OF EXPANDED FIELD SCREENING

Due to the presence of pavement over the majority of the newly surveyed areas, it is difficult to correlate the measurements to those taken in unpaved (unshielded) areas at the Site. The shielding by the pavement would suggest the counts per minute (CPM) value would be somewhat less than the CPM in the unpaved portions of the Site.

Comparative Evaluation

Measurements taken in unpaved areas at the Site were on the order of 6,000 to 9,000 CPM, with a cleanup standard of 20,000 CPM based on a calibrated standard. Conversely, measurements taken in paved areas at the Site were on the order of 4,000 to 7,000 CPM (about 30 percent less than in unpaved areas) suggesting cleanup standard of 13,000 to 15,000 CPM. However, this correlation is subject to considerable uncertainty and should only be used as a general qualitative indicator of the presence or absence of gamma contamination.

In evaluating the data, STS considered CPM trends observed in the paved areas, to assess the presence of anomalies (elevated gamma counts) beneath the pavement.

Readings Along the Western Perimeter. In the western parking lot, the background readings for the paved areas were typically in the 5,000 to 6,000 CPM range. The lowest values were in the low 4,000 CPM along the south side of the Commonwealth Edison substation. The highest values in this parking lot area were in the 9,000 to 10,000 CPM range at the northeast corner of the substation, at the northwest corner of the lot near the elevator, and at the northeast corner of the lot near the Golf Center building. These associations with buildings suggest the elevated readings may be the result of brick (a source of gamma radiation) or other construction materials influencing the readings. Similarly, the lowest readings could be from a thicker pavement or footing section, particularly where those low readings are immediately adjacent to the building wall.

Readings on North Harbor Drive. Measurements taken on Harbor Drive are generally in the 4,000 to 6,000 CPM range. The highest measurement in the paved section was 7,500 CPM. North Harbor Drive may have a thicker pavement section, in that the readings are lower, more in line with the parking lot to the west.

Readings on North Field Drive. The readings on North Field Drive range from approximately 6,000 to 8,000 CPM, with low readings in the upper 5,000 CPM range and a high reading of 11,000 CPM. Again, none of these readings appear sufficiently high to be indicative of a localized area of gamma contamination.

Readings Along Other Portions of the Perimeter. The remainder of the perimeter areas consists of a mixture of paved paths, brick-paved patios and unpaved areas. Those areas exhibit a range of gamma readings somewhat lower than the remainder of the Site but still within the anticipated range. Values range from 4,000 CPM lows to upper 9,000 CPM highs, but are typically in the 5,000 to 7,000 CPM range. None of these areas exhibit evidence of elevated radioactivity indicative of contamination.

DATA INTERPRETATION AND CONCLUSIONS

Based upon the results of the expanded survey no additional areas of elevated gamma radiation indicative of contamination (twice background levels) have been identified at the Site. The areas found to be contaminated in the previous surveys (in unpaved areas) exhibited gamma readings in the 20,000 to 300,000 CPM range and higher. The expanded gamma radiation survey described herein did not identify areas with anomalous gamma readings (additional sources of radiation).


Considering the presence of pavement cover and the potential shielding affects, STS recommends that if future development or renovation activities remove existing pavements, gamma radiation screening should be conducted in paved areas exhibiting the highest gamma measurements.

These interpretations are based on our survey data and experience on similar sites in the immediate vicinity. No guarantee regarding the presence or absence of radiologically impacted soil or fill is intended, either expressed or implied, in the conclusions and findings in this letter report.

If you have any questions regarding the findings of this additional investigation or any other aspect of this project, please call with of the undersigned at (847) 279-2500.

Regards,

STS CONSULTANTS, LTD.


Stephen G. Torres, C.P.G.
Science Group Manager

Richard G. Berggreen, C.P.G.
Principal Geologist

Attachment